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NEWS 3	APR 03	CAS coverage of exemplified prophetic substances enhanced
NEWS 4	APR 07	STN is raising the limits on saved answers
NEWS 5	APR 24	CA/CAplus now has more comprehensive patent assignee information
NEWS 6	APR 26	USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
NEWS 7	APR 28	CAS patent authority coverage expanded
NEWS 8	APR 28	ENCOMPLIT/ENCOMPLIT2 search fields enhanced
NEWS 9	APR 28	Limits doubled for structure searching in CAS REGISTRY
NEWS 10	MAY 08	STN Express, Version 8.4, now available
NEWS 11	MAY 11	STN on the Web enhanced
NEWS 12	MAY 11	BEILSTEIN substance information now available on STN Easy
NEWS 13	MAY 14	DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format
NEWS 14	MAY 15	INPADOCDB and INPAFAMDB enhanced with Chinese legal status data
NEWS 15	MAY 28	CAS databases on STN enhanced with NANO super role in records back to 1992
NEWS 16	JUN 01	CAS REGISTRY Source of Registration (SR) searching enhanced on STN
NEWS 17	JUN 26	NUTRACEUT and PHARMAML no longer updated
NEWS 18	JUN 29	IMSCOPROFILE now reloaded monthly
NEWS 19	JUN 29	EPFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields
NEWS 20	JUL 09	PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields
NEWS 21	JUL 14	USGENE enhances coverage of patent sequence location (PSL) data
NEWS 22	JUL 27	CA/CAplus enhanced with new citing references
NEWS 23	JUL 16	GBFULL adds patent backfile data to 1855
NEWS 24	JUL 21	USGENE adds bibliographic and sequence information
NEWS 25	JUL 28	EPFULL adds first-page images and applicant-cited references
NEWS 26	JUL 28	INPADOCDB and INPAFAMDB add Russian legal status data

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

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=> FILE CASREACT

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.44	0.44

FILE 'CASREACT' ENTERED AT 15:04:57 ON 01 AUG 2009
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FILE CONTENT:1840 - 26 Jul 2009 VOL 151 ISS 5

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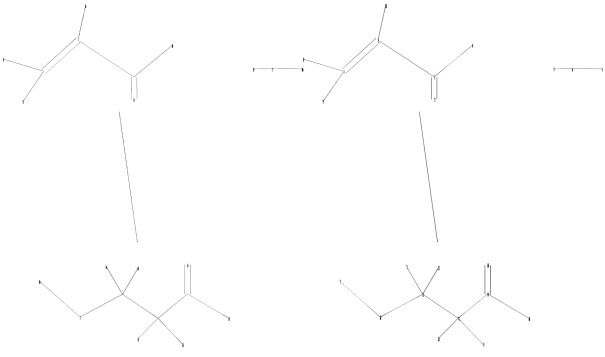

chain nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
chain bonds :
1-2 1-8 1-9 2-3 2-10 3-4 3-11 5-6 6-7 12-13 12-17 13-14 13-21 13-22
14-15 14-19 14-20 15-16 15-18
exact/norm bonds :
3-11 12-13 15-18
exact bonds :
1-2 1-8 1-9 2-3 2-10 3-4 5-6 6-7 12-17 13-14 13-21 13-22 14-15 14-19
14-20 15-16

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS
10:CLASS 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS
18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS
fragments assigned product role:
containing 12
fragments assigned reactant/reagent role:
containing 1
containing 5

```
L1      STRUCTURE UPLOADED

=> S L1 FULL
FULL SEARCH INITIATED 15:05:28 FILE 'CASREACT'
SCREENING COMPLETE -    47118 REACTIONS TO VERIFY FROM     4466 DOCUMENTS

100.0% DONE   47118 VERIFIED      13 HIT RXNS                    10 DOCS
SEARCH TIME: 00.00.08

L2          10 SEA SSS FUL L1 (    13 REACTIONS)

=> S L2 ABD BASE
MISSING OPERATOR L2 ABD
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> S L2 AND BASE AND ACID
        41867 BASE
       255988 ACID
L3          1 L2 AND BASE AND ACID

=> D L3 IBIB ABS CRD


L3   ANSWER 1 OF 1  CASREACT  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        140:356948  CASREACT
TITLE:                   Catalytic addition reaction for the production of
                         3-(methylthio)propanal from mercaptomethane and
                         acrolein
INVENTOR(S):             Rey, Patrick
PATENT ASSIGNEE(S):      Adisseo France S.A.S., Fr.
SOURCE:                  Eur. Pat. Appl., 10 pp.
                         CODEN: EPXXDW
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
     ---------------  ----  --------      ---------------  --------
     EP 1413573        A1   20040428      EP 2002-356211   20021024
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
     CA 2495746        A1   20040506      CA 2003-2495746  20031014
     WO 2004037774     A1   20040506      WO 2003-IB4557   20031014
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
             GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
             OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
             TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
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AU	2003267771	A1	20040513	AU 2003-267771	20031014
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EP	1556343	B1	20070829		
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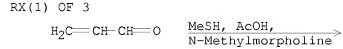
BR	2003015385	A	20050823	BR 2003-15385	20031014
CN	1705641	A	20051207	CN 2003-80101589	20031014
CN	1277816	C	20061004		
JP	2006515834	T	20060608	JP 2004-546263	20031014
AT	371642	T	20070915	AT 2003-748466	20031014
ES	2291662	T3	20080301	ES 2003-748466	20031014
RU	2336266	C2	20081020	RU 2005-105040	20031014
ZA	2005001389	A	20060726	ZA 2005-1389	20050216
MX	2005004158	A	20050803	MX 2005-4158	20050419
US	20050240048	A1	20051027	US 2005-524548	20050516
US	7256315	B2	20070814		
NO	2005002471	A	20050725	NO 2005-2471	20050523
PRIORITY APPLN. INFO.:				EP 2002-356211	20021024
				WO 2003-IB4557	20031014

AB A process for the production of 3-(methylthio)propanal comprises reacting mercaptomethane and acrolein in the presence of a catalyst comprising an organic base such as an N-alkylmorpholine (e.g., 4-methylmorpholine).

RX(1) OF 3



NOTE: optimization study, optimized on catalyst
CON: STAGE(1) room temperature -> 40 deg C; 40 deg C

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D L2 IBIB ABS CRD 1-10

L2 ANSWER 1 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 149:448709 CASREACT
TITLE: Synthesis of methionine- and norleucine-derived phosphinopeptides
AUTHOR(S): Liboska, Radek; Picha, Jan; Hanclova, Ivona; Budesinsky, Milos; Sanda, Miloslav; Jiracek, Jiri
CORPORATE SOURCE: Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Prague 6, 166 10, Czech Rep.
SOURCE: Tetrahedron Letters (2008), 49(39), 5629-5631
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We present a straightforward synthesis of N-Fmoc-protected synthons derived from a phosphinic analog of methionine. These precursors were used successfully for the solid-phase synthesis of methionine-mimic phosphinopeptides using BOP-catalyzed coupling without protection of the

phosphoryl moiety. We also prepared a new type of pseudopeptide derived from a phosphinic analog of norleucine with a -PO(OH)CH2CO2R moiety.

RX(1) OF 110

NOTE: Michael addition
CON: 0 deg C

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

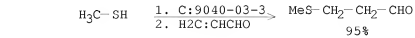
L2 ANSWER 2 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 144:214741 CASREACT
TITLE: Method and catalysts for preparing 3-(methylthio)propanal from acrolein and methyl mercaptan and for the manufacture of 2-hydroxy-4-(methylthio)butanenitrile from it and hydrogen cyanide
INVENTOR(S): Dubner, Frank; Weckbecker, Christoph
PATENT ASSIGNEE(S): Germany
SOURCE: U.S. Pat. Appl. Publ., 8 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060030739	A1	20060209	US 2005-198609	20050805
US 7119233	B2	20061010		
DE 102004038053	A1	20060427	DE 2004-102004038053 20040805	
CA 2573047	A1	20060216	CA 2005-2573047	20050714
WO 2006015684	A2	20060216	WO 2005-EP7666	20050714
WO 2006015684	A3	20060803		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1778631	A2	20070502	EP 2005-775924	20050714
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
CN 101031542	A	20070905	CN 2005-80026591	20050714
JP 2008508330	T	20080321	JP 2007-524209	20050714
BR 2005013072	A	20080422	BR 2005-13072	20050714

MX 2007000345 A 20070307 MX 2007-345 20070109
IN 2007KN00106 A 20070629 IN 2007-KN106 20070109
PRIORITY APPLN. INFO.: DE 2004-102004038053200408O5
WO 2005-EP7666 20050714
OTHER SOURCE(S): MARPAT 144:214741

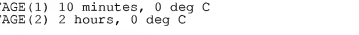
AB A method is described for preparing 3-(methylthio)propanal (I) by the the addition reaction of Me mercaptan to acrolein in the presence of macro-reticular resin catalysts containing pendant tertiary-amine groups [e.g., [(dimethylamino)methyl]styrene copolymer] to give I which is then reacted with HCN in the presence of the same catalyst to give 2-hydroxy-4-(methylthio)butanenitrile. Process flow diagrams are presented.

RX(1) OF 7



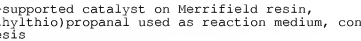
NOTE: solid-supported catalyst on Merrifield resin, 3-(methylthio)propanal used as reaction medium, batchwise synthesis
CON: STAGE(1) 10 minutes, 0 deg C
STAGE(2) 2 hours, 0 deg C

RX(3) OF 7



NOTE: solid-supported catalyst on Merrifield resin, 3-(methylthio)propanal used as reaction medium, continuous synthesis
CON: STAGE(1) 30 minutes, 50 deg C; 30 minutes, 40 deg C

RX(4) OF 7



NOTE: solid-supported catalyst on Merrifield resin, 3-(methylthio)propanal used as reaction medium, batchwise synthesis
CON: STAGE(1) 10 minutes, 0 deg C
STAGE(2) 2 hours, 0 deg C

RX(6) OF 7

NOTE: solid-supported catalyst on Merrifield resin, 3-(methylthio)propanal used as reaction medium, continuous synthesis
CON: STAGE(1) 30 minutes, 50 deg C; 30 minutes, 40 deg C

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 140:356948 CASREACT
TITLE: Catalytic addition reaction for the production of 3-(methylthio)propanal from mercaptomethane and acrolein
INVENTOR(S): Rey, Patrick
PATENT ASSIGNEE(S): Adisseo France S.A.S., Fr.
SOURCE: Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1413573	A1	20040428	EP 2002-356211	20021024
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
CA 2495746	A1	20040506	CA 2003-2495746	20031014
WO 2004037774	A1	20040506	WO 2003-IB4557	20031014
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003267771	A1	20040513	AU 2003-267771	20031014
EP 1556343	A1	20050727	EP 2003-748466	20031014
EP 1556343	B1	20070829		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003015385	A	20050823	BR 2003-15385	20031014
CN 1705641	A	20051207	CN 2003-80101589	20031014
CN 1277816	C	20061004		
JP 2006515834	T	20060608	JP 2004-546263	20031014
AT 371642	T	20070915	AT 2003-748466	20031014
ES 2291662	T3	20080301	ES 2003-748466	20031014
RU 2336266	C2	20081020	RU 2005-105040	20031014
ZA 2005001389	A	20060726	ZA 2005-1389	20050216
MX 2005004158	A	20050803	MX 2005-4158	20050419
US 20050240048	A1	20051027	US 2005-524548	20050516
US 7256315	B2	20070814		
NO 2005002471	A	20050725	NO 2005-2471	20050523
PRIORITY APPLN. INFO.:			EP 2002-356211	20021024
			WO 2003-IB4557	20031014

AB A process for the production of 3-(methylthio)propanal comprises reacting mercaptomethane and acrolein in the presence of a catalyst comprising an

organic base such as an N-alkylmorpholine (e.g., 4-methylmorpholine).

RX(1) OF 3

NOTE: optimization study, optimized on catalyst
CON: STAGE(1) room temperature -> 40 deg C; 40 deg C

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

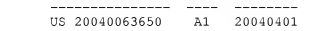
L2 ANSWER 4 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 140:287102 CASREACT
TITLE: Method for producing 3-methylthiopropanal from acrolein and methyl mercaptan
INVENTOR(S): Shiozaki, Tetsuya; Haga, Toru
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
SOURCE: U.S. Pat. Appl. Publ., 4 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040063650	A1	20040401	US 2003-665006	20030922
JP 2004115461	A	20040415	JP 2002-282874	20020927
JP 4186572	B2	20081126		
EP 1408029	A1	20040414	EP 2003-21191	20030924
EP 1408029	B1	20061122		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
ES 2275989	T3	20070616	ES 2003-21191	20030924
CN 1496979	A	20040519	CN 2003-125534	20030925
CN 100349863	C	20071121		
IN 2003CH00786	A	20051118	IN 2003-CH786	20030925

PRIORITY APPLN. INFO.: JP 2002-282874 20020927

AB 3-Methylthiopropanal is produced in high yield and selectivity by supplying acrolein and Me mercaptan together or sequentially with an acidic compound (e.g., acetic acid) and a basic compound (e.g., pyridine) into a reaction system to react the acrolein with the Me mercaptan, where the basic compound is used in an amount of about 0.3 mol or less per mol of the acidic compound

RX(1) OF 1



NOTE: other products detected
CON: 45 - 50 minutes, 70 deg C

L2 ANSWER 5 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 128:114715 CASREACT
TITLE: Processes for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile
INVENTOR(S): Blackburn, Thomas F.; Pellegrin, Paul F.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: U.S., 9 pp., Cont.-in-part of U.S. 5,663,409.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5705675	A	19980106	US 1995-581249	19951229
US 5663409	A	19970902	US 1995-476356	19950607
ZA 9604335	A	19960820	ZA 1996-4335	19960528
WO 9640631	A1	19961219	WO 1996-US9060	19960604
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RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
AU 9659873	A	19961230	AU 1996-59873	19960604
AU 714151	B2	19991223		
EP 830341	A1	19980325	EP 1996-917222	19960604
EP 830341	B1	20010905		
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CN 1189818	A	19980805	CN 1996-195190	19960604
CN 1092184	C	20021009		
JP 11511119	T	19990928	JP 1997-501471	19960604
RU 2173681	C2	20010920	RU 1998-100220	19960604
ES 2160819	T3	20011116	ES 1996-917222	19960604
PT 830341	T	20011228	PT 1996-917222	19960604
CN 1510030	A	20040707	CN 2002-200212645719960604	

PRIORITY APPLN. INFO.: US 1995-476356 19950607
US 1995-581249 19951229
WO 1996-US9060 19960604

OTHER SOURCE(S): MARPAT 128:114715

AB A catalytic processes for the preparation of 3-(methylthio)propanal and 2-hydroxy-4-(methylthio)butanenitrile using novel addition catalysts is described. The novel addition catalysts include: triisopropanolamine, nicotinamide, imidazole, benzimidazole, 2-fluoropyridine, poly-4-vinylpyridine, 4-dimethylaminopyridine, picoline, pyrazine, trialkylamines, and tertiary amines. E.g., reaction of MeSH and acrolein in presence of poly-4-vinylpyridine gave 89.0% 3-(methylthio)propanal. The aldehyde product, containing the poly-4-vinylpyridine catalyst, was converted to the nitrile in the same reactor by treatment with HCN. The yield of nitrile was 72.9%.

RX(1) OF 3

NOTE: novel process focuses on the catalyst/acid combination; process minimizes the extent of polymer formation

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

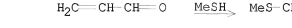
L2 ANSWER 6 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 126:157183 CASREACT
TITLE: Process for the continuous preparation of 3-(methylthio)propanal from acrolein and methyl mercaptan
INVENTOR(S): Hsu, Yung C.
PATENT ASSIGNEE(S): Novus International, Inc., USA
SOURCE: PCT Int. Appl., 85 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9700858	A1	19970109	WO 1996-US10920	19960621
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
US 5905171	A	19990518	US 1996-667099	19960620
AU 9663959	A	19970122	AU 1996-63959	19960621
AU 726921	B2	20001123		
EP 842149	A1	19980520	EP 1996-923452	19960621
EP 842149	B1	20030205		
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, MC, PT, IE				
CN 1188470	A	19980722	CN 1996-194943	19960621
CN 1120834	C	20030910		
JP 11508266	T	19990721	JP 1997-504005	19960621
RU 2172734	C2	20010827	RU 1998-100590	19960621
ES 2192607	T3	20031016	ES 1996-923452	19960621
PRIORITY APPLN. INFO.:			US 1995-421P	19950622
			US 1996-667099	19960620
			WO 1996-US10920	19960621

AB In the title process, a liquid reaction, medium containing 3-(methylthio)propanal and a catalyst for the reaction between Me mercaptan and acrolein, is contacted with a gaseous acrolein feed stream in a gas-liquid contact zone. The gaseous acrolein feed stream comprises acrolein vapor and noncondensable gas and the acrolein is transferred from the acrolein feed stream to the reaction medium. Me mercaptan, introduced into the reaction medium, reacts with the acrolein in that medium,

producing a liquid reaction product containing 3-(methylthio)propanal. The noncondensable gas is then separated from the liquid reaction product the reaction product is divided into a produce fraction and a circulating fraction, and the circulating fraction is recycled to the gas/liquid contact zone. Process flow diagrams are presented.

RX(1) OF 1



NOTE: continous process

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

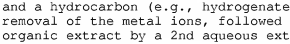
L2 ANSWER 7 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 124:184625 CASREACT
TITLE: Process for the treatment and conditioning of solid or liquid effluents charged with heavy metals
INVENTOR(S): Leybros, Jean
PATENT ASSIGNEE(S): Commissariat a l'Energie Atomique, Fr.
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 687483	A1	19951220	EP 1995-401367	19950613
EP 687483	B1	19980826		
R: BE, CH, DE, ES, GB, IT, LI, NL				
FR 2721237	A1	19951222	FR 1994-7297	19940615
FR 2721237	B1	19960802		
ES 2123221	T3	19990101	ES 1995-401367	19950613

PRIORITY APPLN. INFO.: FR 1994-7297 19940615

AB The effluent is treated with a reducing agent (e.g., SO2) and then contacted with an organic extractant (e.g., bis(2-ethylhexyl)phosphoric acid) and a hydrocarbon (e.g., hydrogenated tetrapropylene) for selective removal of the metal ions, followed by removing the heavy metals from the organic extract by a 2nd aqueous extraction, and precipitating and filtering the metals from the aqueous solution

RX(1) OF 1



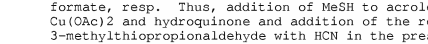
NOTE: Classification: S-Alkylation; "1,4-Addition"; # Conditions: (AcO)2; <50 deg 2atm; # Comments: 4.7.49

L2 ANSWER 8 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 120:133858 CASREACT
TITLE: Process for producing 2-hydroxy-4-methylthiobutanoic acid
INVENTOR(S): Matsuoka, Kazuyuki
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9323372	A1	19931125	WO 1993-JP659	19930520
W: US				
RW: BE, DE, FR, GB				
JP 06049020	A	19940222	JP 1993-143026	19930520
JP 3219544	B2	20011015		
EP 601195	A1	19940615	EP 1993-910360	19930520
EP 601195	B1	19960828		
R: BE, DE, FR, GB				
CN 1084511	A	19940330	CN 1993-107598	19930521
CN 1036391	C	19971112		
US 5386056	A	19950131	US 1994-178315	19940112
PRIORITY APPLN. INFO.:			JP 1992-155802	19920521
			WO 1993-JP659	19930520

AB A process for producing 2-hydroxy-4-methylthiobutanoic acid (I) together with methanol comprises hydrating 2-hydroxy-4-methylthiobutyronitrile (II) into 2-hydroxy-4-methylthiobutanamide (III), reacting the amide with Me formate to yield Me 2-hydroxy-4-methylthiobutanoate (IV) and formamide, and hydrolyzing the Me ester. The discharge of a large amount of ammonium sulfate can be prevented, because no sulfuric acid is used as the reactant. The byproduct formamide and methanol are utilizable as the starting material of the reaction after converting them into HCN and Me formate, resp. Thus, addition of MeSH to acrolein in the presence of Cu(OAc)2 and hydroquinone and addition of the resulting 3-methylthiopropionaldehyde with HCN in the presence of NaOH in MeOH gave II. Hydration of II in the presence of MnO2 in aqueous acetone at 60° for 6 h to give III which was reacted with HCO2Me in MeOH containing MeONa to give IV and the byproduct formamide. Hydrolysis of IV in the presence of Amberlyst 15 in H2O at 95° gave I, while the byproduct MeOH was recovered. Formamide was fed into a stainless steel reactor packed with alumina at 500° to give HCN. MeOH was contacted with a catalyst prepared from Cu(NO3)2 and ammonium chromate in a stainless steel reactor to give Me formate.

RX(2) OF 15



NOTE: 20.degree.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 9 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 51:47157 CASREACT
TITLE: 3-(Methylthio)propanal
INVENTOR(S): Hunt, Madison; Merner, Richard R.
PATENT ASSIGNEE(S): E. I. du Pont de Nemours & Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2776996		19570108	US 1955-461955	19551222

AB A mixture of MeSH (I) 440 and pyridine 16 is fed into acrolein 500 and HOAc 5 parts in an autoclave below 75°. The final portion of 3-(methylthio)-propanal (II) and I is added rapidly at 40° to give 91-7% II.

RX(1) OF 1

NOTE: Classification: S-Alkylation; "1,4-Addition"; # Conditions: MeSH pyridine AcOH; 70-75 deg; # Comments: high yield

L2 ANSWER 10 OF 10 CASREACT COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 42:25284 CASREACT
TITLE: Synthesis of DL-methionine
AUTHOR(S): Pierson, Earl; Giella, Mario; Tishler, Max
CORPORATE SOURCE: Merck & Co., Inc., Rahway, NJ
SOURCE: Journal of the American Chemical Society (1948), 70, 1450-1
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Addition of 48 g. MeSH to 56 g. CH2:CHCHO and 0.5 g. Cu(OAc)2 at 35-40° gives 84% MeSCH2CH2CHO (I), b11 52-4°, n20D 1.4850, d20 1.036 (2,4-dinitrophenylhydrazone, m. 116-19°). I (10.4 g.), shaken with 10.4 g. NaHSO3 in 35 mL. H2O, the product treated (in 3 portions) with 4.9 g. NaCN in 15 mL. H2O (temperature below 35°), the oil immediately extracted with C6H6, and the C6H6 extracted with NaHSO3, gives 90% α-hydroxy-β-(methylmercapto)butyronitrile (II), an oil that distilled at 100°/3 μ. I (26 g.), 113 g. (NH4)2CO3, 24.5 g. NaCN, 335 mL. EtOH, and 335 mL. H2O, heated 4 h. at 50-5°, and the filtrate concentrated to 300 mL. and heated 5 min. at 90° with 50 mL. concentrated HCl, give 79% 5-(2-methylmercaptoethyl)hydantoin (III), m. 103-5°; it results in 50% yield (based on I) from II and (NH4)2CO3 in 50% MeOH (2.5 h. at 50-5°). III (17.4 g.) and 8.8 g. NaOH in 75 mL. H2O, refluxed 6 h., an addnl. 4.4 g. NaOH added, and the refluxing continued for 18 h., give 10.6 g. DL-methionine (IV), m. 269°

(decomposition); if I and III are not isolated, the yield (based on CH2:CHCHO) is 50%. II (123 g.), treated 30 min. at 60° with NH3, gives 40% of crude methionine nitrile, which could not be purified; hydrolysis by heating 5.5 h. on the steam bath with 20 mL. concentrated HCl yields 75% IV. Hydrolysis of III to IV was also effected by concentrated HCl at 135° and by (NH4)2S at 135°.

RX(1) OF 1

NOTE: Classification: "1,4-Addition"; S-Alkylation; # Conditions: Cu(OAc)2 MeSH gas; 30mn 40 deg; 1h

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---Logging off of STN---

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Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	197.58	198.02
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-8.58	-8.58

STN INTERNATIONAL LOGOFF AT 15:07:59 ON 01 AUG 2009